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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,268	02/29/2000	Robert George Ahrens	6-89-5-2	1790

7590 02/11/2003

Kevin M Mason
Ryan & Mason LLP
90 Forest Avenue
Locust Valley, NY 11560

EXAMINER

VALENCIA, DANIEL E

ART UNIT PAPER NUMBER

2874

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,268

Applicant(s)

AHRENS ET AL.

Examiner

Daniel E Valencia

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-12, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 5-8, 13-16, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Vischulis U.S. Patent No. 3,749,924. Refer to the appropriate drawings or parts of the specification. Vischulis discloses a target position-detecting device having means to adjust response of photocells with all of the limitations of the abovementioned claims. Regarding the claims, the reference discloses an optical receiving unit for a wireless communication link (fig 1 and 2), said optical receiving unit comprising: a receiving unit including at least one objective element (45);

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and an optical bundle operable to receive an optical signal (79), wherein said optical bundle is comprised of an array of fibers arranged surrounding a receiving fiber, wherein said array of fibers detects a location of said signal relative to said receiving fiber and provides feedback to adjust the orientation of said receiving unit (col. 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 10-12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vischulis in view of Hatori U.S. Patent No. 5,299,560. Refer to the appropriate drawings or parts of the specification. Vischulis as applied above discloses an optical receiving unit with a majority of the limitations of the claimed invention. Regarding claims 2, 3, 10, and 11, the Vischulis device teaches N fibers with apertures; however, the reference does not explicitly disclose that N is to facilitate fabrication or that the aperture is to capture as much light as possible. One of ordinary skill in the art would recognize that facilitating fabrication and capturing light are advantageous features of an optical signal-carrying device. It would also be inherent of any optical fiber device in the art, that its structure be selected to facilitate fabricating an allow a maximum amount of light to couple into the fiber. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the number of fibers in the bundle to facilitate fabricating and maximize capturing of light in the fibers.

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In addition, the reference fails to teach recessing a receiving fiber. On the other hand, Hatori discloses an endoscope in which a bend remaining in the insertion portion upon removal of storage is reduced that teaches the limitations that the Vischulis reference lacks. Regarding claims 4, 12, and 18, Hatori discloses a similar fiber bundle (fig. 1) with an objective lens (7); wherein the receiving fiber is recessed (3). Hatori teaches that it is advantageous to recess the receiving fiber, because the lens can be disposed in the recess (col. 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Vischuli to have the receiving fiber, which is recessed.

Allowable Subject Matter

Claims 5-8, 13-16, and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: As to dependent claims 5, 13, and 19 the prior art alone or in combination does not disclose or render obvious an optical receiving unit of claims 4, 12, and 17, respectively, wherein the receiving fiber is recessed relative to said array by appending an extension bundle to said optical bundle to add additional length to each of said fibers in said array. For example, although Hatori discloses a recessed receiving fiber, the reference does not disclose an extension bundle for adding length to the fibers in the array.

As to dependent claims 7, 15, and 20 the prior art alone or in combination does not disclose or render obvious an optical receiving unit of claims 4, 12, and 17, respectively, wherein

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the receiving fiber is recessed relative to said array by appending a silica disk to said optical bundle. For example, although Hatori discloses a recessed receiving fiber, the reference does not disclose a silica disk for appending to the optical bundle.

Conclusion

The prior art documents submitted by the applicant in the Information Disclosure Statement filed on September 16, 2002, have all been considered and made of record (note attached copy of form PTO-1449).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Thorsten U.S. Patent No. 4,722,587 discloses a fiber bundle technique for aligning light emitters within connectorized emitter packages, wherein an objective lens is used to direct the light to a bundle.

Nishioka U.S. Patent No. 4,721,359 discloses an illuminating optical system for endoscopes, wherein the optical receiving unit uses an optical bundle and an objective lens.

Fournier U.S. Patent No. 5,461,476 discloses an optical; apparatus for receiving scattered light, wherein the bundle makes up the receiving unit.

Laor U.S. Patent No. 6,031,947 discloses a 1xN optical switch that uses a fiber bundle as a receiving unit.

JDZ
~~Laor~~^{Pan} U.S. Patent No. 5,864,643 discloses a miniature 1xN electromechanical optical switch and variable attenuator that uses a fiber bundle as a receiving unit and a detector for alignment.

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Lee U.S. Patent No. 6,005,998 discloses a strictly non-blocking scalable matrix optical switch, wherein the optical bundle makes up a receiving unit that is used in conjunction with an objective lens.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E Valencia whose telephone number is (703)-305-4399. The examiner can normally be reached on Monday-Friday 9:30-6:00.

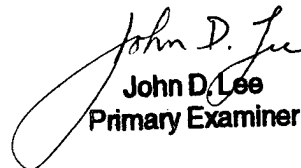
The fax phone numbers for the organization where this application or proceeding is assigned are (703)-308-7724 for regular communications and (703)-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



dv

February 6, 2003



John D. Lee
Primary Examiner